CLEMSON UNIVERSITY

Cotton/Soybean Insect Newsletter

Volume 6, Issue #12 **Edisto Research & Education Center in Blackville, SC** **21 July 2011**

Pest Patrol Hotline

If you do not have access to this newsletter but want the information contained herein each week, there is a toll-free hotline for insect problems updated here. I will update the short message weekly for at least as long as the newsletter runs. Call the free number **(877) 285-8525** and select the messages you would like to hear. Select #3 for the Southeast, and select #1 to hear my message. The hotline is sponsored by Syngenta.

News from Above the Lakes

Randy Cubbage, county agent covering Lee, Kershaw, and Sumter Counties, reported that he returned yesterday to a MGIV soybean field in Cassatt that had a building population of bean plataspids/kudzu bugs last week, and the insects had dispersed. They were still in the field but not clustered as they were previously and very few were on the volunteer corn plants also. He reported that the farmer had purchased insecticide to treat but suggested he hold off due to small numbers. "Last week I would have treated. I see no type of damage where they were last week." Russell Duncan reported seeing the bean plataspid in soybeans in Florence County, and I saw them in soybeans in Lancaster County.

News from Below the Lakes

Jonathan Croft, county agent covering Dorchester and Berkeley Counties, reported that he checked several cotton fields yesterday with a grower and was starting to see aphids building. Dr. Mike Sullivan, retired entomologist and crop consultant, also reported that he was seeing building populations of aphids in some fields, particularly those treated already with a pyrethroid for stink bugs.

Also, thanks to the efforts of Marion Barnes, county agent covering Colleton County, we have confirmed the presence of the kudzu bug in Beaufort County, the last remaining county in SC to be infested. All of SC is now infested with *Megacopta cribraria*. See the section "Kudzu Bug/Bean Plataspid" for more information.

News from the Piedmont/Upstate

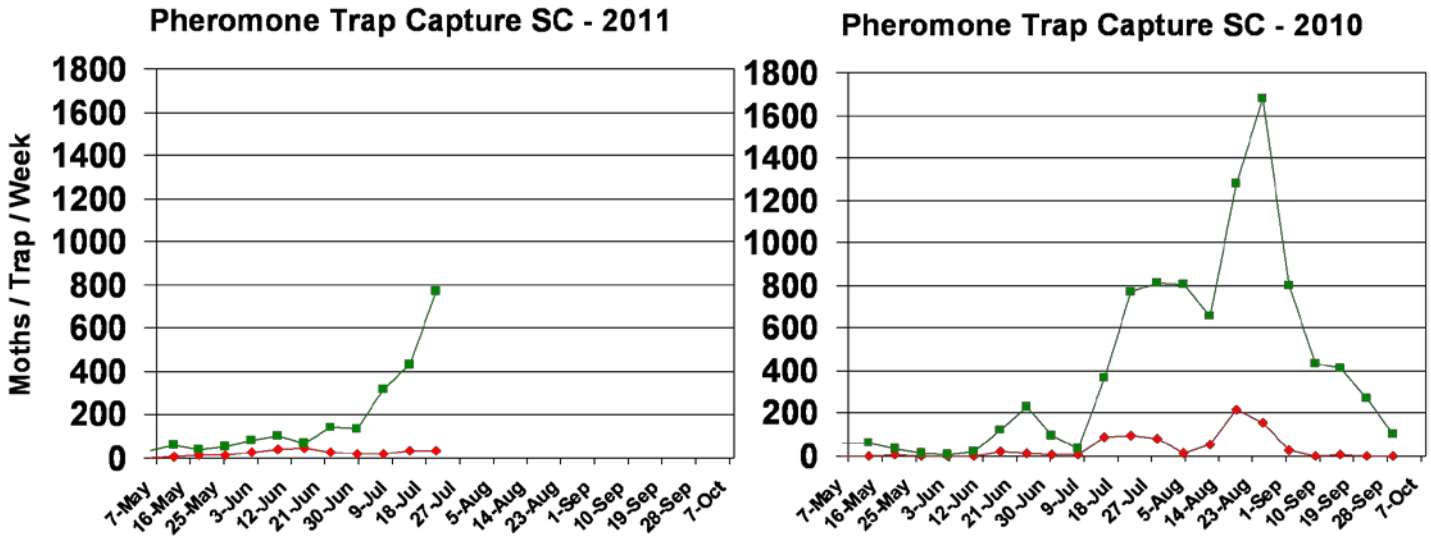
Jay Crouch, area county agent in Newberry, reported that they "started chopping silage here full force last week. [Bean] plataspids are present in mass on corn plants here as well. Jay also wanted to know more about "our thoughts as to treatment thresholds [for bean plataspids] in soybeans? I have some growers getting anxious".

Cotton Situation

As of 18 July 2011, the USDA NASS South Carolina Statistical Office had our progress at about 75% of the crop as squaring, compared with 82% last year at this time and 78% for the 5-yr average. About 40% of the crop has set bolls, compared with 24% last year at this time and 21% for the 5-yr average. Temperatures have remained high, and widespread showers have brought relief to some areas, but we need more. The overall soil moisture levels in the state were described as 26% very short, 48% short, 26% adequate, with no surplus. Conditions for cotton were reported as 2% very poor, 12% poor, 47% fair, 37% good and 2% excellent. These are observed/perceived state-wide averages.

Bollworm & Tobacco Budworm

Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC last season and this season are shown below. Numbers are similar so far – how high with they go this year? Tobacco budworm continues to be important for our soybean acres and for a limited number of non-Bt-cotton acres. I provide these data as a measure of moth activity in our local area where I use these data as an indication of moth presence and activity near my research plots. The numbers are not necessarily representative of the species throughout the state.



Do I Need a Consultant?

The insect situation is tricky this year and less predictable at this stage than normal (stink bugs, aphids, etc). I am hearing many reports of erratic infestations by insects in cotton this season. Typically, we have widespread numbers of stink bugs and boll damage, but I am hearing that this season is different than the norm. We have

more variability with infestation levels and not every field is triggering on boll damage right now, even at the reduced dynamic threshold level of 10%. Would a producer know this if he/she didn't have a consultant looking at all of their acres? No, they wouldn't. For those that have gone the route without a consultant, anticipating and planning for automatic applications of insecticide for stink bugs, bollworms, etc, that strategy might work during some years, but it is not going to work this season and most years. For the price of an unnecessary or poorly timed application of insecticide, one could hire a consultant to look at every acre and report when individual fields need to be treated. The extra eyes on the crop are going to see the usual (and unusual) problems that a busy producer might miss, potentially saving more money and time that would otherwise not happen without the consultant. What is the best thing to put on your fields? It is cliché, but the shadow of a consultant is the best thing to put out there. Enough "preaching".

Cotton Insect Control Guide

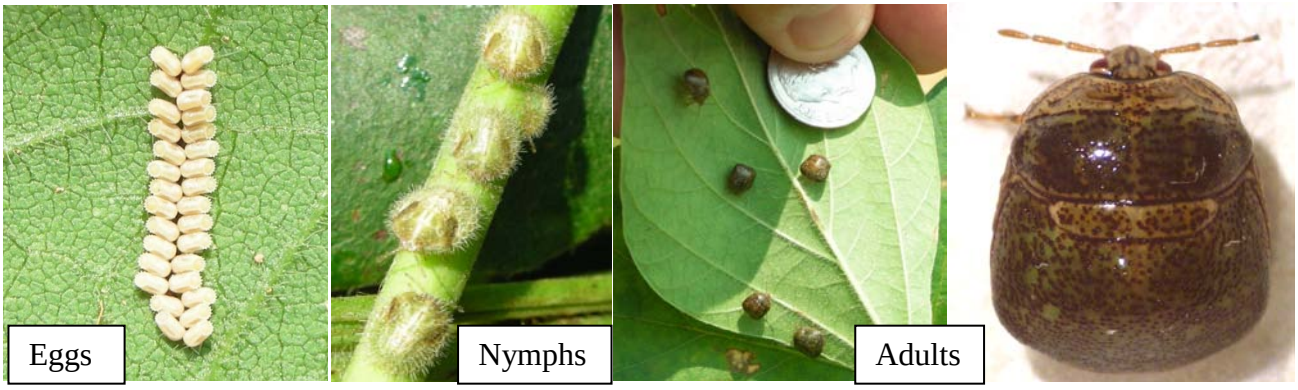
Clemson University Publication IC97 (Cotton Insect Management) has been revised for 2011 and is available free from your local county office. It is also available online at:
http://www.clemson.edu/psapublishing/pages/ENTOM/IC97.PDF

Soybean Situation

As of 18 July 2011, the USDA NASS South Carolina Statistical Office had our progress at 100% of soybeans as planted, the same for where we were last year at this time and the 5-yr average. About 92% of soybeans have emerged, behind where we were last year at 99% and the 5-yr average of 98%. Conditions for soybeans were reported as 6% very poor, 28% poor, 47% fair, 18% good and 1% excellent. These are observed/perceived state-wide averages.

Kudzu Bug/Bean Plataspid

The kudzu bug (a.k.a. bean plataspid), *Megacopta cribraria*, is NOW IN EVERY COUNTY IN SC. It continues to spread in the Southeast. ***It has been found on kudzu, wisteria, lima beans, soybeans and other leguminous hosts.*** Please continue to inform me if they are observed in any crops, particularly soybeans. ***Please email me with reports from soybeans in all counties not reporting them in the crop previously – see map below.***



Kudzu bugs/bean plataspids are extensively in soybeans right now at various levels of infestation. Be on the lookout for adults, eggs, and hatching immatures. My graduate student and I have many on-going trials that will hopefully help answer the many questions we are getting about this species. We have insecticide efficacy trials, residual insecticide trials, treatment threshold tests in early- and late-maturing varieties, a protected by crop phenology test, cage trials with varying density levels of bugs, etc. These projects and the work going on in Georgia should provide much information for use in managing this species. At this point, we are still learning about this insect. It takes years to develop tools such as treatment thresholds for insect pests. We simply have not had that opportunity with this new insect yet.

In our test of residual activity of a pyrethroid and an OP insecticide at the highest labeled rates in soybeans, we were disappointed to learn that we did not get the extended residual control from the pyrethroid that we thought we might see. By three days after spraying, the mortality had dropped to less than 50% with both classes of chemistry. So, from this initial test, it looks like we cannot rely on residual control to help us much. Coverage and initial kill is the goal with this species. They can and will quickly reinfest a soybean field.

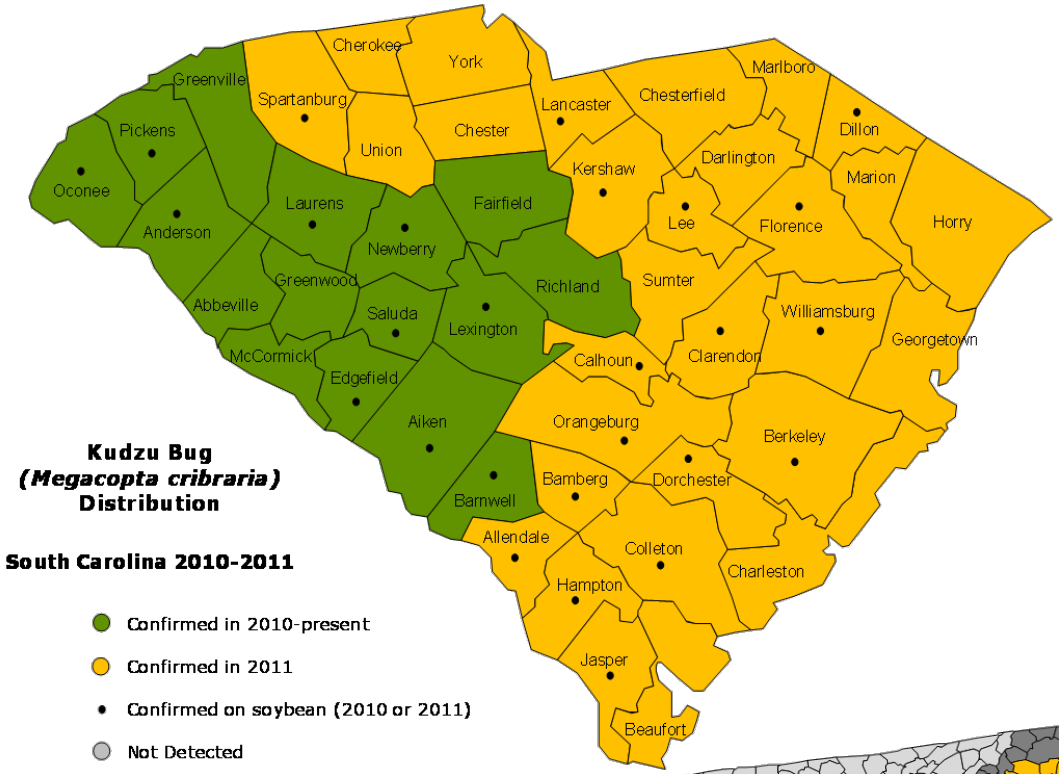
Here is what we know about the kudzu bug/bean plataspid (*Megacopta cribraria*):

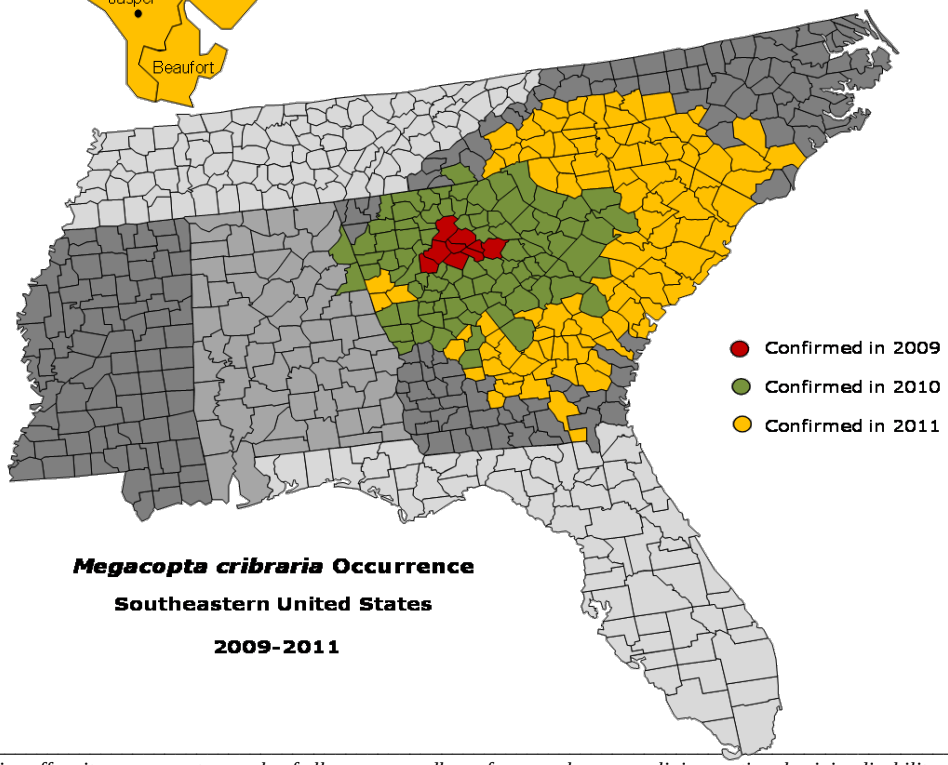
1. The species is invasive and was reported in soybeans for the first time in the USA just a year ago (July of 2010).
2. It is here without its natural enemy complex – unchecked, except by us (if necessary).
3. Preliminary data from UGA indicate that it is capable of causing yield loss when present/sustained at high densities.
4. It is susceptible to our labeled/commonly used "stink bug" insecticides (pyrethroids, acephate, etc.) in soybeans, but quick re-infestation is a major concern. These insects are very capable fliers.
5. The species definitely prefers legumes such as kudzu and wisteria and other wild hosts and soybeans and other bean crops.
6. The species will infest the edges of fields first and then colonize the remainder of the field. Infestations are clumped initially but more uniformly distributed later.
7. The species does not feed on pods or chew leaves. It has piercing/sucking mouthparts like stink bugs, but it prefers to feed on stems and petioles, so the damage is not clearly evident. It causes indirect damage to the plant that affects yield potential by reducing the number of pods that will form, number of seed per pod, size of seed, etc (from work conducted in Georgia last year).
8. The species is highly reproductively capable; so many egg masses can be seen on leaves in an infested field.

Here is what we do not know:

1. How many bugs it takes to cause yield loss.
2. How long will an insecticide provide residual control after initial "knock-down".
3. Which growth stages of soybean are more susceptible to damage…i.e. when do we need to start and quit spraying for this insect?
4. Will trap crops work?
5. Etc…etc…etc…

The latest known distribution of the kudzu bug in SC is represented below. **We have it confirmed in every county as established on a host**. We are now documenting the presence of the species on soybeans (counties with dots below). Some were observed in soybeans last year, and many more will be observed on the crop this season. A map of the infested portions of the southeastern USA is also shown.





Southeast map courtesy of Dr. Wayne Gardner (UGA).

Soybean Insect Control Guide

Clemson University Publication SL1 (Soybean Insect Management) has been revised for 2011 and is available free from your local county office. It is also available online at:
http://www.clemson.edu/psapublishing/pages/AGRO/SL1.PDF

Pest Management Handbook - 2011

Insect control recommendations are also available online in the 2011 Pest Management Handbook at:
http://www.clemson.edu/extension/rowcrops/pest/index.html

Need More Information?

Log on to the following web pages to view important cotton management recommendations, data, and historical cotton/soybean insect newsletters:

For more cotton and soybean information:
http://www.clemson.edu/public/rec/edisto/research/index.html

For past newsletters:
http://www.clemson.edu/extension/rowcrops/cotton/pest_management/newsletters/index.html

Sincerely,

Jeremy K. Greene, Ph.D.
Associate Professor – Entomologist

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http://www.clemson.edu